

2009 BMW 750i (F01) V8-4.4L Turbo (N63)

Vehicle > Engine, Cooling and Exhaust > Engine > Camshaft, Lifters and Push Rods > Camshaft > Service and Repair > Removal and Replacement

11 31 032 REMOVING AND INSTALLING/REPLACING LEFT INLET CAMSHAFT

11 31 032 Removing and installing/replacing left inlet camshaft (N63)

Special tools required:

(cylinder bank 5 to 8)



Important!

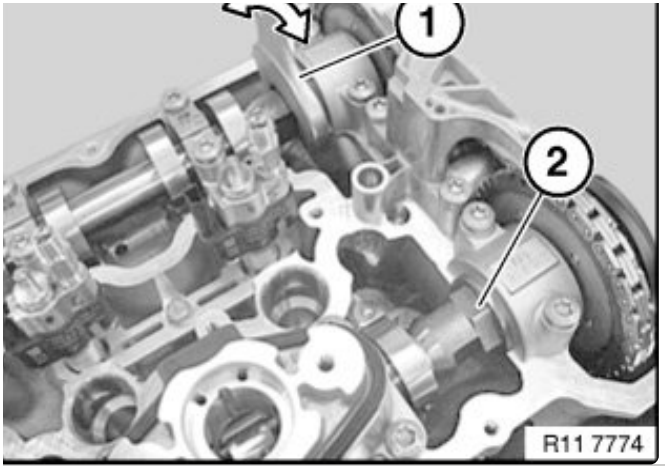
The intake camshaft must first be rotated in such a way that the camshaft is free from tension when the bearing caps are released (risk of damage).



Necessary preliminary work:

- ^ Remove left cylinder head cover.
- ^ Check timing.
- ^ Remove left inlet adjustment unit.

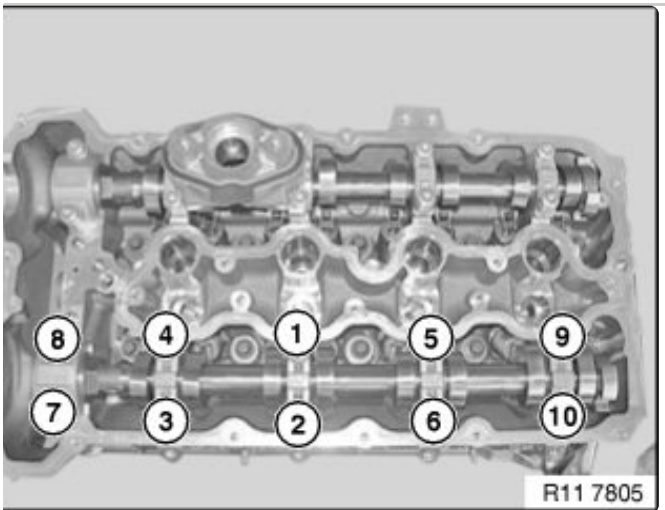




Important!

No cam on the inlet camshaft is permitted to press directly onto a roller cam follower.
With cylinder no. 1 at 150° before firing TDC there is no piston in the TDC position.

Rotate left inlet camshaft at dihedron with a fork wrench (1) into a suitable position.



Release bolts of camshaft bearings in sequence (10 to 1) in 1/2 turns.

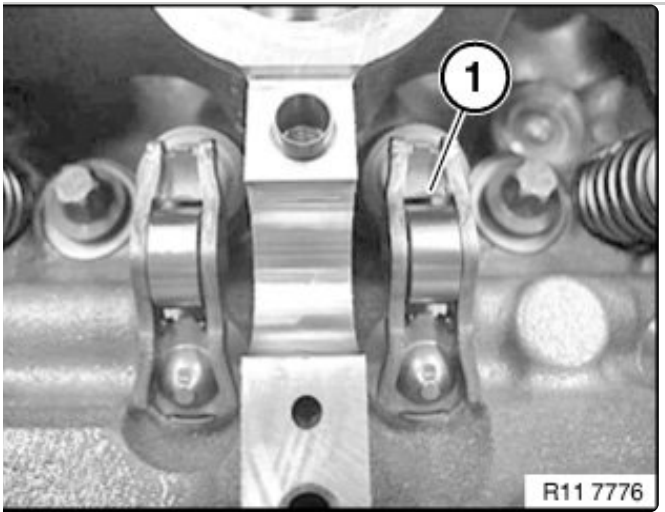
Set down all bearing caps in a tidy and orderly fashion on special tool 11 4 480.

Intake camshaft

Important!

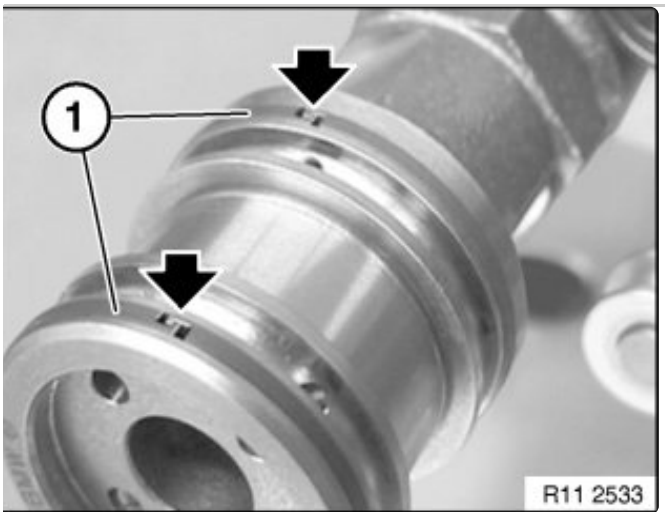
Used rocker arms (1) may only be reused in the same position.



**Note:**

Rocker arms (1) are freely accessible after inlet camshaft has been removed.

Do "not" remove rocker arm (1) on intake side.

**Important!**

Plain compression rings (1) can easily break.

If necessary, replace plain compression rings (1).

Press compression ring (1) on one side into groove, pull up on other side and remove catch.

Carefully pull compression ring (1) apart and remove towards front.

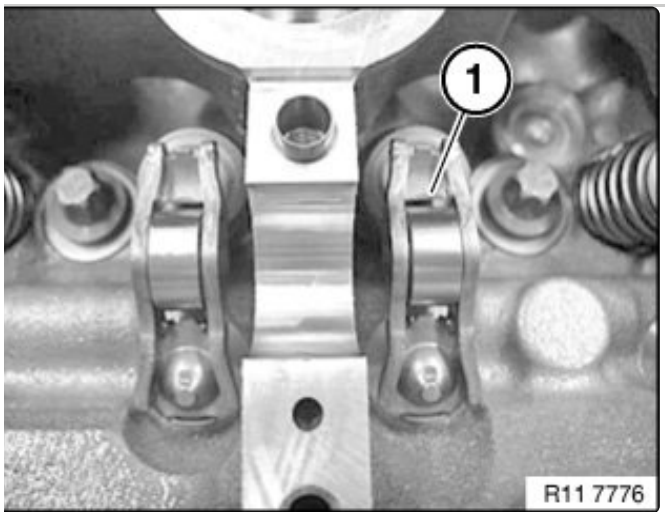
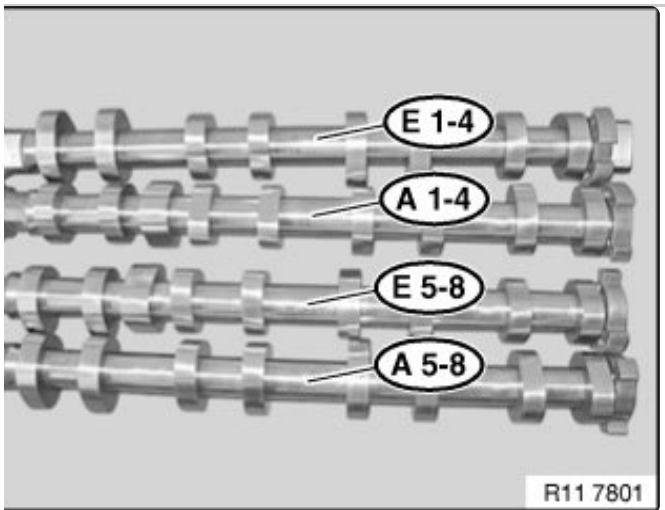


Ends of compression rings (1) point upwards.

Make sure compression rings (1) are engaged at ends.

Note:

The intake camshaft of cylinder bank 5 to 8 is marked with "E 5-8".



Important!

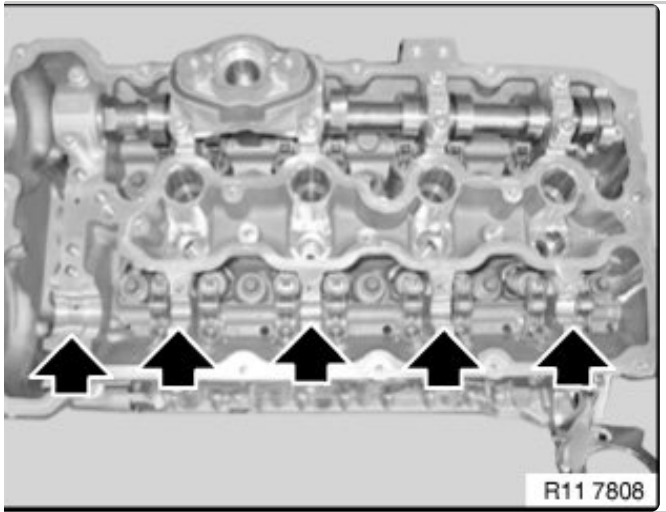
Rocker arms (1) slip slightly when inlet camshaft is fitted.

Make sure rocker arms (1) are secured as illustrated on hydraulic valve clearance compensating elements and on valves.

Align all rocker arms (1) straight



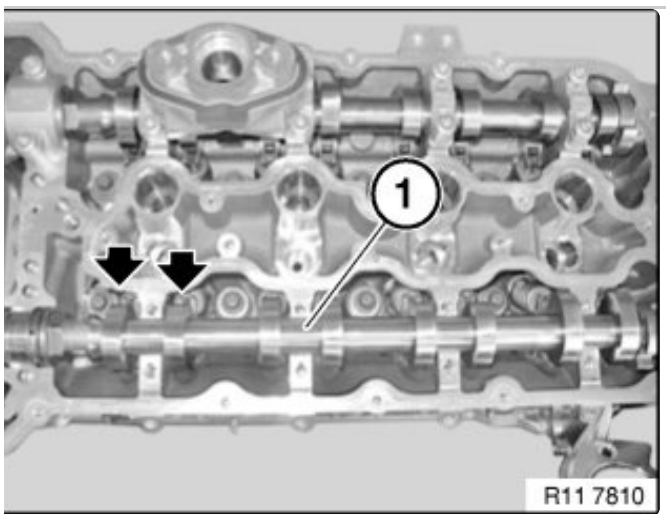
Align an rocker arm (1) straight.

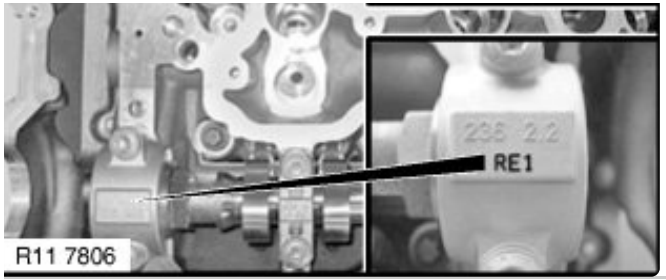


Coat all bearing positions with engine oil.

Insert intake camshaft.

Insert inlet camshaft (1) so that cams point to side at cylinder 5 as shown in picture.





Important!

Do not mix up the bearing caps of cylinders 1 to 4 and 5 to 8.

All bearing caps are coded and can only be installed in one position.

All bearing caps are marked:

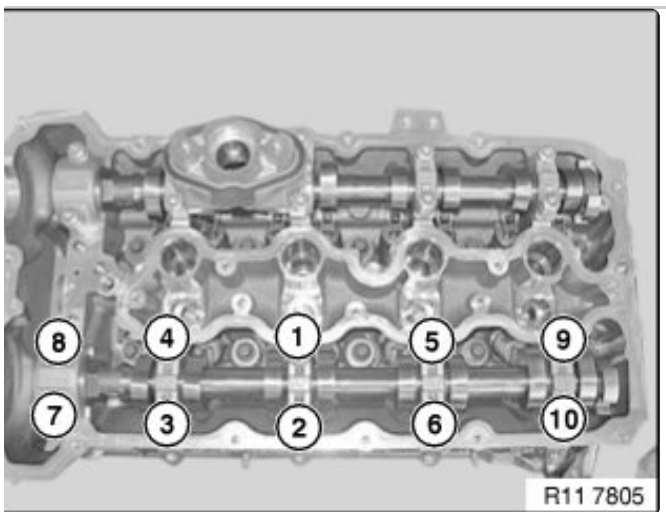
L= Cylinders 1 - 4.

R= Cylinders 5 - 8.

E= Intake side

A= Exhaust side

1= designation from 1 to 5



Insert all bolts.

Tighten down bolts in sequence (1 to 10) in 1/2 turns.



Tightening torque: 11 31 6 AZ.

Tightening torque: 11 31 7 AZ.



Install inlet adjustment units.

Adjust valve timing.

Assemble engine.

11 31 Camshaft

	Type	Thread	Tightening specification	Measure
1AZ Tensioning rail and guide rail, cyl. 1 to 4, to crankcase	N63	M10x1.25	Insert screws dry	46 Nm
2AZ Tensioning rail and guide rail, cyl. 5 to 8, to crankcase	N63	M8x1.25		20 Nm
3AZ Guide rail to cylinder head	N63	M14x1.5	Replace sealing ring	25 Nm
4AZ Sliding rail to cylinder head	N63	M7		15 Nm
5AZ Chain tensioner to cylinder head	N63	M7		13 Nm
6AZ Camshaft bearing cap to cylinder head	N63	M7		15 Nm
7AZ Camshaft step bearing cap to cylinder head	N63	M7		15 Nm

